

WHAT IS CLAIMED IS:

1. A storage medium for storing a program for allowing a computer to execute sequential procedures, said computer being connected to a storage apparatus for executing a backup from each original volume to each duplicate volume when having received pair information, said pair information including each original-volume name and each duplicate-volume name, said sequential procedures comprising sequential procedures of:

holding a first table that, if files as backup objects are classified into plural groups, stores each group name, file names, and each policy in a manner of being made to correspond to each other, said file names being included in said each group, said each policy being a method for managing replication data;

holding a second table for storing said file names, said group names, and flags in a manner of being made to correspond to said duplicate-volume names, said flags indicating whether or not said duplicate volumes are available;

when transmitting said pair information to said storage apparatus in response to a receipt of a specified first group name, said pair information including a first original-volume name and a first duplicate-volume name, said first original-volume storing therein a first file, storing said first file

name and said specified first group name into said second table in a manner of being made to correspond to said first duplicate-volume;

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein the data of said first file, extracting said first duplicate-volume name out of said second table, said first duplicate-volume storing therein replication data of said first file;

extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name;

judging whether or not said policy has a flag, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name, said flag indicating that only data in the newest state is necessary for a file backed up in response to a receipt of the specified first group name; and,

determining, depending on the judgment result, whether or not said flag should be stored into said second table, said flag indicating that said first duplicate volume is available.

2. A replication-data management method whereby, using a computer connected to a storage apparatus for executing a backup from each original volume to each duplicate volume when having received pair information, said pair information including each original-volume name and each duplicate-volume name, replication data stored in said each duplicate volume is managed by said execution of said backup,

said computer holding a first table and a second table if files as backup objects are classified into plural groups, said first table being designed for storing file names in a manner of being made to correspond to each group name, said file names being included in said each group, said second table being designed for storing said file names and said group names in a manner of being made to correspond to said duplicate-volume names,

said replication-data management method comprising a step of:

when transmitting said pair information to said storage apparatus in response to the receipt of a specified first group name, said pair information including a first original-volume name and a first duplicate-volume name, said first original-volume storing therein a first file, storing said first file name and said specified first group name into said second table in a manner of being made to correspond to said first duplicate-volume name.

3. The replication-data management method according to Claim 2, further comprising the steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein the data of said first file, extracting said first duplicate-volume name by making reference to said second table, said first duplicate-volume storing therein said replication data of said first file; and,

extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name.

4. The replication-data management method according to Claim 3, wherein

said first table stores therein each policy, said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said computer holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available,

said replication-data management method

further comprising the steps of:

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name; and,

determining, depending on the judgment result, whether or not said flag should be stored into said third table, said flag indicating that said first duplicate volume is available.

5. The replication-data management method according to Claim 4, wherein said step of judging whether or not said policy satisfies said predetermined condition is a step of judging whether or not said policy has a flag, said flag indicating that only data in the newest state is necessary for a file backed up with said group specified, said group being made to correspond to said policy.

6. The replication-data management method according to Claim 2, wherein said each group includes files which are updated as a result of executing each business-operation, said each business-operation being one collection of a series of processings.

7. The replication-data management method according to Claim 6, wherein

said first table stores therein each policy, said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said computer holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available,

said replication-data management method further comprising the steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including files which are updated as a result of executing a second business-operation, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein said first file which belongs to said second group, extracting said first duplicate-volume and said first group name, said first duplicate-volume storing therein said replication data of said first file, said first group name being stored in said second table in a manner of being made to correspond to said first duplicate-volume name;

judging whether or not a file name is only said first file name, said file name being stored in said first table in a manner of being made to correspond to said extracted first group name;

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to

correspond to said extracted first group name; and,  
determining, depending on the judgment  
result, whether or not a flag should be stored into  
said third table, said flag indicating that said second  
duplicate volume is available.

8. A computer connected to a storage apparatus  
for executing a backup from each original volume to  
each duplicate volume when having received pair  
information, said pair information including each  
original-volume name and each duplicate-volume name,  
said computer comprising:

a memory unit for holding a first table and a  
second table when files becoming backup targets are  
classified into plural groups, said first table being  
designed for storing file names in a manner of being  
made to correspond to each group name, said file names  
being included in said each group, said second table  
being designed for storing said file names and said  
group names in a manner of being made to correspond to  
said duplicate-volume names; and

a volume setting unit for executing a step  
of:

when transmitting said pair information to  
said storage apparatus in response to a receipt of a  
specified first group name, said pair information  
including a first original-volume name and a first  
duplicate-volume name, said first original-volume  
storing therein a first file, storing said first file

name and said first group name whose specification has been received into said second table in a manner of being made to correspond to said first duplicate-volume name.

9. The computer according to Claim 8, comprising said volume setting unit for further executing the steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein the data of said first file, extracting said first duplicate-volume name by making reference to said second table, said first duplicate-volume storing therein said replication data of said first file; and,

extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name.

10. The computer according to Claim 9, wherein said first table stores therein each policy, said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said memory unit holding a third table for storing flags in a manner of being made to correspond



to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available,

said computer comprising said volume setting unit for further executing the steps of:

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name; and,

determining, depending on the judgment result, whether or not said flag should be stored into said third table, said flag indicating that said first duplicate volume is available.

11. The computer according to Claim 10, wherein said step of judging whether or not said policy satisfies said predetermined condition is a step of judging whether or not said policy has a flag, said flag indicating that only data in the newest state is necessary for a file backed up with said group specified, said group being made to correspond to said policy.

12. The computer according to Claim 8, wherein said each group includes files which are updated as a result of executing each business-operation, said each business-operation being one collection of a series of processings.

13. The computer according to Claim 12, wherein said first table stores therein each policy, said each

policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said memory unit holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available,

said volume setting unit being a volume setting unit for further executing the steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including files which are updated as a result of executing a second business-operation, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein said first file which belongs to said second group, extracting said first duplicate-volume name and said first group name, said first duplicate-volume storing therein said replication data of said first file, said first group name being stored in said second table in a manner of being made to correspond to said first duplicate-volume name;

judging whether or not a file name is only said first file name, said file name being stored in said first table in a manner of being made to correspond to said extracted first group name;

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name; and,

determining, depending on the judgment result, whether or not a flag should be stored into said third table, said flag indicating that said second duplicate volume is available.